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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,001	03/22/2004	Stephen S. Shiao	CE10443J	1207
34952 7590 02/23/2007 FLEIT, KAIN, GIBBONS, GUTMAN, BONGINI & BIANCO P.L. 551 N.W. 77TH STREET, SUITE 111 BOCA RATON, FL 33487			EXAMINER PEREZ, JULIO R	
			ART UNIT	PAPER NUMBER
			2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/806,001

Applicant(s)

SHIAO ET AL.

Examiner

Julio R. Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 4, 8-11, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlin et al. (hereinafter Gitlin), US 6,064,662 in view of Gardner US 2004/0125740.

Regarding claims 1, 8, 14, Gitlin discloses a method (wireless device) for receiving digital data, the method comprising: receiving a plurality of RF carriers (col. 4, lines 14-42, teach allocation of frequency bands, that is, channels or carriers to different users), at least two carriers of the plurality of carriers divided into a periodic series of timeslots for each carrier (Note that col. 4, lines 14-53 teach allocation of "slices" of the frequency band, which read on the carriers divided into timeslots) where each timeslot in the periodic series of timeslots is able to carry independent data content (col. 4, lines 14-25 teach low and high-speed users, which are allocated different frequency slices for carrying signal information over a medium, which read on carrying independent data, the at least two carriers each modulated with different portions of a single data stream during at least one timeslot of each carrier within the periodic series of timeslots (col. 4, lines 17-67, Note that col. 4, lines 18-21, 64-67, teach "high-speed users have the ability

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to modulate their signals” or “users may align themselves with their assigned time-frequency slices (i.e., timeslots) via appropriate signal configuration (modulation)”, which reads on modulating the different portions within the timeslots.

Gitlin does not explicitly disclose demodulating the at least two carriers to detect the different portions of the single data stream and assembling the different portions of the single data stream to reconstruct the single data stream.

Gardner teaches, “digital filter bank may then be used to select a frequency band from the digital samples (single data stream portions) to form a time-domain representation of a modulated carrier. The time-domain representation of the modulated carrier may then be transformed into a frequency-domain sample set. The frequency-domain sample set may then be demodulated in order to recover a data sub-stream (i.e., data portion of the data stream). According to this illustrative method, a plurality of sub-streams may then be combined to form a data stream” and he present invention also comprises an alternative embodiment of a data receiver for demodulating a digital sample stream representing a signal modulated with a multi-carrier modulation in which the individual carriers have been filtered for spectral containment or other purposes.” (Pars. 30, 43, 60). Note that par. 60, lines 18-20 further teaches the data multiplexer to combine (i.e., assemble) the data sub streams (i.e., data portions) into a single data stream to be delivered to a particular receiver, which read on “assembling the different portions of the single data stream to reconstruct the single data stream”.

It would have been obvious to one skilled in the art at the time of the invention to modify Gitlin, such that data sub streams from the different channels may have been

demodulated or configured and reconstructed, to provide means for recuperating the data streams more accurately and efficiently.

Regarding claims 2, 9, 15, the combination of Gitlin and Gardner discloses selectably receiving the single data stream on a dedicated carrier, the dedicated carrier divided into a periodic plurality of dedicated timeslots, the single data stream being periodically modulated during at least one of the periodic plurality of dedicated timeslots, the dedicated timeslots being longer than the at least one timeslot (Gardner, par. 32, teach receiving data stream and producing several data sub streams, which are modulated).

Regarding claims 3, 10, 16, the combination of Gitlin and Gardner discloses one timeslot comprises at least two timeslots that are divided between at least two carriers, wherein the at least two timeslots occur simultaneously (Gitlin, Figures 1-2, col. 4, lines 17-67 teach the transmission of information at the same time, which reads on occurring simultaneously).

Regarding claims 4, 11, 17, the combination of Gitlin and Gardner discloses at least two carriers further comprise a service timeslot, and further comprising deactivating the receiver during at least a period of time outside of the at least one timeslot and the service timeslot (Gitlin, Figures 1-2, depict a guard band, i.e., service timeslot or channel; col. 4, lines 18-21).

3. Claims 5-6, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlin et al. (hereinafter Gitlin), US 6,064,662 in view of Iwamura US 2006/0034330.

Regarding claims 5,12, Gitlin teaches claim 1, but is silent on where the adjusting a number of timeslots within the at least one timeslot by one of adding at least one timeslot and de-allocating at least one timeslot.

Iwamura teaches "the transmitter is informed of time slots it is assigned, wherein the master adjusts the slots available for assignment" (par. 74), which reads on adjusting a number of timeslots.

It would have been obvious to one skilled in the art at the time of the invention to modify Gitlin, such that assigning the slots represent adjusting a number of slots, to efficiently manage network resources.

With further regard to claims 6,13, Iwamura teaches requests for bandwidth and prioritization of bandwidth requests, which read on response to an event that changes a current "data bandwidth requirements".

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Gardner.

Regarding claim 7, Gardner discloses a method for transmitting digital data, the method comprising: accepting a single data stream (par. 28, 32. Note that par. 32, lines 6-8,

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teach a data communications device receiving data stream); dividing the single data stream into different portions (pars. 30, 32, 33; par. 33, lines 1-3, teach a digital data stream being converted to digital samples, which reads on dividing the data stream into portions; par. 32, lines 7-8, further teaches generating a plurality of sutras out of the single data stream, which reads on dividing the single data stream into portions); and modulating a plurality of RF carriers (Figure 1, # 10), at least two carriers of the plurality of carriers divided into a periodic series of timeslots for each carrier Figure 1, #'s 10, 150, 15, 20, 25, pars. 32, 38, 43. Note that par. 38, lines 3-7, teach the modulated carriers are the representation of the sum of the sample sets, which were transformed into a frequency-domain, which read on modulating the plurality of carriers that are divided into series of timeslots (plurality of carriers, i.e., channels or timeslots or slots; i.e., par. 43), where each timeslot in the periodic series of timeslots is able to carry independent data content, the at least two carriers each modulated with the different portions during at least one timeslot of each carrier within the periodic series of timeslots (pars. 32, 38, 39, 43).

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Regarding claim 14-19, the claimed invention is directed to non-statutory subject matter.

**\*\*>**Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” In this context, “functional descriptive material” consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of “data structure” is “a physical or logical relationship among data elements, designed to support specific data manipulation functions.” The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) “Nonfunctional descriptive material” includes but is not limited to music, literary works, and a compilation or mere arrangement of data.

MPEP 2106.1.

The “computer program product” is simply a computer program (page 19 of specifications). Further the claim does not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result).

Furthermore, the claimed limitation does not discuss any issues regarding a memory for storing the computer program product or instructions, which is encoded on a computer readable medium. Therefore, the claim is unpatentable over 35 USC 101.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R. Perez whose telephone number is (571) 272-7846. The examiner can normally be reached on 10:30 - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William H. Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
2/13/07

Julio R Perez  
Examiner  
Art Unit 2617

  
WILLIAM TROST  
SENIOR PATENT EXAMINER  
TECHNOLOGY CENTER 2600